

ON THE FLORA OF STRADBROKE ISLAND, WITH A DESCRIPTION OF
NEW SPECIES.

BY F. M. BAILEY, F.L.S., &c.

The above island has been visited by botanists, and yet its flora is not well known. I made a visit to it some short time since in company with the Rev. B. Scortechini, a member of this Society and an indefatigable worker in the flora of South Queensland. The island forms one of the south and east boundaries of Moreton Bay. It is about forty miles in length, and seven wide. It is of somewhat wedge-shaped form. It seems to be mainly composed of loose drift sand, and may at one time have been a bank drifted up from the ocean similar to those which now make Moreton Bay so shallow or so difficult of navigation. The sand hills on the island are of considerable height, with large freshwater swamps between. There is not much grass, and what there is becomes coarse in the scrubs, but in places where there is not much timber a fair turf is formed. Spots may be found where *Loysia pungens*, Willd., forms a turf almost equal to the couch or *Cynodon dactylon*, Pers.

The timber consists of a few *Eucalypti*, conspicuous amongst which is *E. Planchoniana*, F.v.M., a tree hitherto thought confined to the Eight Mile Plains on the Logan road. *E. robusta*, Sm., is of frequent occurrence round the edge of the swamps. There are several *Banksia*: *B. semula*, R. Br., is the most abundant and forms a large spreading tree. Its wood constitutes the principal fuel used at the Benevolent Asylum at Dunwich on this island. The other trees are *Casuarina*, *Acacia*, *Frenela*, *Timonius Rumphii*, Roxb., &c. The shrub *Ricinocarpus pinifolius*, Desf., here grows up into a small fastigial tree like a little Cypress. It flowers profusely and is one of the most beautiful of Australian shrubs. *Leptosperma*, *Melaleuca* and plants of *Epacrideæ* are numerous, but it will suffice here to mention only those whose Queensland

habitat is not given in Bentham's and Mueller's Flora. First of these, *Boronia pinnata*, Sm., is met with in abundance along the edge of swamps forming often a dense thicket of from five to six feet in height. This when in bloom is a very attractive plant. *B. parviflora*, Sm., a much smaller species is frequently found in various localities. On some spots of very dry ground high up on the hill sides usually under the *Cusuarina* and *Frenela* we noticed large quantities of *Macarthuria neocambrica*, F.v.M., a small, probably an annual, plant belonging to *Ficoideæ*. The following might be added to the diagnosis of this species given in the "Flora Australiensis":—Habit of plant compact, 6 to 12 in. broad, 3 to 6 in. high, composed of a few lanceolate radical leaves 3 or 4 in. long, which taper into rather long petioles. The rest of the plant formed of flowering branches which are dichotomously divided, bearing few small linear-oblong, nearly filiform leaves. Flowers near the ends of the branches, small, and pedicellate. Petals white, seeds black, and muricate. Flowering in October.

Scattered over both Stradbroke and Peel Island are two species of *Dipodium*, the common *D. punctatum*, R. Br., and another new species of which the following is a diagnosis:

ORDO ORCHIDEÆ.—TRIB. VANDEÆ.

Dipodium Hamiltonianum, F. M. B., (*sp. nov.*)

Glabrum, rhizomate brevibus crassis squamis induto, caule multifloro, sepalis petalisque aequaliter oblongis, flavis, bifida caudicula reclinante.

In locis arenosis insulæ Stradbroke et Peel: F. M. B.

Planta cfoliata. Rhizoma spissum, caudis 1—3' longus, basi circumdatus brevibus, crassis, obtusis, imbricatis squamis, superioribus acutiusculis, nec ita vicinis. Flores 24—30 maximam caudis partem tenentes, aurco-fulvi, purpureo maculati. Sepalia et petalia fere aequalia 8" oblonga. Labellum similiter longum, vel paulo longius, mento brevi, lateralibus lobis linearibus, obtusis, erectis, croceis, medio lobo oblongo, roseo, duplici lineari eminenti callo ad basim rimato, prope

finem multo albo tomento induto. Columna dimidium sepalium attingens. Pollinia duo ovalia, supra bifidum caudiculum tota sua longitudine in columnam recumbentem lata.

Brevitas squamarum, florum color et numerus, caudiculæ reclinatio, quæ constans cernitur unoquoque exemplari ad tristinam revocato, optime sejungunt ham speciem a D. punctato.

Homine Jacobi Hamiltoni ham speciem roco, qui curam gerens publici Instituti a viris senio confectis, plurimum adjuvat in colligendis Naturalis Historiæ exemplaribus circa Insulas ad Moreton sinum positas.

Plant near *D. punctatum*, leafless, stems 1 to 3 feet high from a thick rhizome, the base clothed with thick, short, obtuse, imbricate scales, the upper ones more distant and acute. Flowers large, distant, but numerous, often from 24 to 30, usually of a rich yellow spotted with purple, and occupying the greater part of the stem. Sepals and petals oblong, about eight lines long. Labellum as long or longer, pouch short, lateral lobes linear, obtuse, erect, yellow, middle lobe oblong, pink, disk with two raised lines, the upper part with a dense white tomentum. Column about half as long as the sepals. Pollen-masses two, oval, the caudicles closely prostrate, rather long, like a line on the surface until lifted on the point of a needle.

The shortness of the scales, the color of flowers and above all the prostrate or recumbent position of the caudicles which is constant in all the flowers examined, separate this species from *D. punctatum*. It is the most attractive of all our Queensland terrestrial orchids, and wants but to be seen to become a favorite with cultivators of this curious family.

Hab. Stradbroke and Peel Islands, Moreton Bay.

The specific name is in honour of Mr. James Hamilton, the Superintendent of the Benevolent Asylum, Dunwich, who has always lent a helping hand to collect the Natural History specimens of the Islands of Moreton Bay.

The most beautiful of the flowering plants are met with in the large swamps or along their margins. *Philydrum lanuginosum*, Banks, which on the main land seldom rises above three feet, we noticed over six feet high with correspondingly large foliage and flowers, reminding one of the New Zealand flax. *Drosera binata* Labill., which is a small weed in Tasmania, here occurs with flower stalks two to three feet high. Equal in height with these are the curiously twice-forked leaves measuring often one foot in diameter. Here also the *Xyris operculata*, Labill., produces large bright yellow attractive flowers. But the most beautiful of these swamp flowers are the two forms of *Blandfordia*, *B. flammula*, Hook., and its golden variety "aurea"; these plants attain the height of three or four feet, and bear at the summit of the stalks a number of bell-shaped flowers about two inches long.

Two species of *Xanthorrhæa* inhabit these swamps. *X. macronema* F.v.M., which bears the largest flowers of the genus is a very showy plant and well worthy of garden cultivation. The other species is *X. hastilis*, R. Br. It is somewhat remarkable that no Queensland habitat is mentioned in the Flora Australiensis for this species, considering it is so plentiful on the island, and also that its flower spikes are used by the natives to make into a kind of beer. They collect the abundant juice from the nectary and allow it to ferment.

In viewing the extensive swamps of Stradbroke one cannot help feeling somewhat surprised that they should be allowed to be idle when they are so admirably adapted for rice cultivation. With regard to the richness of the soil one has only to look at the luxuriance of the natural vegetation, and this is so striking as to cause one to think that instead of plants of unusually luxuriant growth one had fallen in with new species. The land is flat, but easily drained and of large extent. In parts where the swamps are timbered is seen in perfection the superb orchid, *Phaius grandifolius*, Lour., and its yellow variety *Bernaysii*, with the other lovely terrestrial orchid *Calanthe veratrifolia*, Bl.;

we were glad also to see at the foot of some of the *Avicennias* just so as to be washed by the high tide, the pretty little Primulaceous creeper *Samolus repens*, Pers. Epiphytal orchids do not seem to be plentiful on the trees, and at the time of our visit, there were but few fungi to be seen, except at one spot where we found a large quantity of the poisonous agaric *Russula emetica*, Fr., found also in Europe. On some old logs we also gathered specimens of one of the cup lichens *Cladonia pyxidata*, Hoffm. Our stay was so short that we could do no more than glance about us, but no doubt an immense harvest awaits a patient and industrious collector on this island. Our visit was made at the end of October.

As next to the discovery of new species, fresh habitat is of importance to the botanist, I will bring under your notice that *Erythrina indica*, Lam., a tree hitherto thought to be exclusively tropical has been lately met with at Tallegalla the high land of the Rosewood scrubs situated some thirty or forty miles from Brisbane. Mrs. Marquis from whom I received the specimens, tells me that there are several of these trees, and that they are from sixty to one hundred feet high, thus equalling those of our tropical coast.

I will conclude these few remarks with the description of a new species of *Angophora* and *Daviesia* which I found some time back at a locality called "the Eight Mile Plain" about ten or twelve miles from Brisbane on the Logan Road.

ORDO MYRTACEÆ.—TRIB. LEPTOSPERMÆ.

Angophora Woodsiana, F. M. B., (*sp. nov.*)

Arbor alta, cortice persistente, et rimoso, capite expanso. Ramuli saepe tetragoni. Folia crassiuscula 4—7" longa, lanecolata-acuminata, basi obliquo cuneata, copiosis ac subtilibus venis pinnatis in venam juxta marginem desinentibus, et venulis reticulatis inter primarias percursa, in petiolum $\frac{1}{2}$ — $\frac{3}{4}$ " longum angustata. Paniculæ terminales, maxime

ramosæ; quisque ramus vel pedunculus late compressus umbellas gerens 2—7 florum, qui magnitudine aliarum angophorarum flores exsuperant. Pedicelli $\frac{3}{4}$ —1" longi acute angulares. Calicis tubus tres lineas longitudine, 4-5 lineas latitudine in summitate metiens, costatus, quatuor vel quinque costis patentibus, cæteris non ita conspicuis. Petala communiter quatuor, basi lata, summitate retusa, duro apice veluti in *A. intermedia*. Frutescens calix summitate $\frac{1}{2}$ " latus.

In planitie vulgo dict. "Eight Mile Plains," prope Brisbane una cum *Eucalyptum Baileyana* tum *Planchoniana* invenitur.

Speciem hanc dicavi præstanti ac Reverendo Domino Juliano E. Tenison-Woods, Linneæ Societatis Neo Camb. Aust. digno Præsidi.

Sp. *A. subvelutina* foliis subcordatis valde proxima.

A large tree with spreading head. Bark rough, persistent as in *A. intermedia*. Timber like the rest of the genus of but little value, and having concentric fissures, filled with a red fluid gum similar to the Bloodwood (*Eucalyptus corymbosa*). The branchlets often four-angled; leaves thick, four to seven inches long, lanceolate-acuminate, oblique-cuneate at the base, with numerous fine parallel pinnate veins, and reticulate between them, connected by an intramarginal one near the edge, petioles half to three-quarter inches long. Panicles terminal, large, spreading, each branch or peduncle flattened and bearing an umbel of two to seven rather large flowers. Pedicels three-quarters to one inch long, acutely angled; calyx-tube three lines long, four or five lines diameter at the top, ribs four or five prominent, the secondary ones inconspicuous or altogether wanting. Petals usually four, broad and truncate at the top, the apiculate extremity of the hard part being below the margin as in *A. intermedia*. Fruiting calyx half in diameter at the top, and rather longer with four or five prominent wings produced into teeth, secondary ribs wanting or inconspicuous. Pedicels slender, angled, one inch long.

Habitat Eight Mile Plains, in company with *Eucalyptus Baileyana* and *E. Planchoniana*. The specific name is in honor of the Rev.

J. E. Tenison-Woods, F.G.S., President of the Linnean Society, New South Wales.

This species is allied to *A. subvelutina*, on the one hand, and *A. intermedia* on the other. The young foliage being somewhat cordate at the base and slightly glaucous like the first, and the habit of the tree is that of the latter. But its panicles and flowers are larger, the pedicels longer and the secondary ribs of the calyx are more frequently wanting; the foliage is also much larger and of a thicker consistence.

ORDO LEGUMINOSÆ.

Daviesia Wyattiana, F. M. B., *Series umbellatæ*.

Frutex alba, erecta, glabra 3—10' metiens. Rami acute triangulares striati. Folia linearia 6—12" longa, 2—3" lata, basim versus ubi media costa utrinque conspicua cernitur, angustata, venis maxime obliquis parallellis, atque ita reticulatis ut oblongas areolas construant, 1—3 pedunculi ex superioribus axis emanantes 8" circiter longi, quisque gerens umbellum quinque florum pariter pedicellatorum. Bractæ tres vel quatuor subtus medietatem pedunculorum sitæ, atque aliae efformantes involuerum prope pedicellas. Pedicelli 6" circiter longi, articulati prope calicem. Calix 2" longus, aequè denticulatus, leviter interne pubescens. Vexillum flabelliforme emarginatum, luteum, circa medium purpureum 3" latum, alae aequè ac vexillum longae, luteæ ad apicem purpureæ. Legumen compressum 5" longum. Semina per pluries solitaria, oblonga ampla strophiola donata.

Apud Eight Mile Plains. Florescit mense Sept. ac Novembris.

Species voveo Doctori Gulielmo Wyatt qui in Australia meridionali botanicam ac horticulturam maxime fovet.

A tall erect glabrous shrub of from five to ten feet, branches acutely triangular, the faces striate. Leaves linear, six to twelve inches long, two or three lines broad, tapering towards the base, where the midrib is prominent on both sides, veins very oblique almost parallel, the reticulations forming oblong areoles.

Peduncles one to three in the axils, the upper branches about eight lines long, each bearing an umbel of usually five pedicellate flowers. Bracts three or four obtuse small ones on the lower half of the peduncle and an involucre of similar ones close under the pedicels. Pedicels about six lines long, articulate just below the calyx. Calyx two lines long, teeth nearly equal, slightly pubescent inside. Standard flabelliform, emarginate, yellow with purple centre about three lines wide. Wings nearly as long as standard. Keel shorter, yellowish with purple tips. Pod flat about five lines long. Seeds usually solitary, oblong, mottled, with large strophiole. Flowering in September and November.

Hab. Eight Mile Plains, Logan Road.

The specific name is in honour of Dr. Wm. Wyatt, a great promoter of Botany and Horticulture in South Australia.

NOTES ON THE HABITS OF THE BLACK BREASTED BUZZARD,
Gypoictinia melanosternon, Gould.

BY K. H. BENNETT, Esq.

The range of this bird—so far as my experience goes—is confined to the plains which border the banks of the Murrumbidgee and Lachlan Rivers, and the wide expanse of open country on the north bank of the latter stream appears to be its especial habitat, for it is most frequently seen in that locality, and here also on several occasions I have discovered its nests. Its prey to a great extent, consists of various reptiles—such as snakes frill-necked, and sleepy lizards—it also has the singular habit of robbing the nests of Emus and Wild Turkeys (Bustards) of their eggs. My first information on this point I obtained from the blacks, and for some time I was inclined to disbelieve their assertion though the same story was told by blacks from all parts of the district, as it was so contrary to my experience of the Accipiter family. At length, however, I was compelled to